

Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 12

MEETING DATE: August 21, 2024

SUBJECT: Portfolio Allocation and Rebalancing Report—Second Quarter

2024

Deliberation Receive SUBMITTED FOR: X Consent and Action and File

RECOMMENDATION

Receive and file the Portfolio Allocation and Rebalancing Report for the quarter ended June 30, 2024.

PURPOSE

This item complies with the SCERS Master Investment Policy Statement reporting requirements related to the review of SCERS' current asset allocation as it compares to established targets and ranges, and physical and Overlay Program rebalancing activity that occurred during the quarter.

SUMMARY

SCERS employs an Overlay Program, which is managed by State Street Global Advisors (SSGA), to rebalance the asset allocation to policy targets and also invest available cash, in a manner which replicates SCERS' policy target strategic asset allocation.

Below is a summary of SCERS' asset category and asset class positioning relative to the target allocations as of June 30, 2024 (based on State Street market values, which can differ from those of SCERS' investment consultants). The comparisons to the benchmark allocations below, and throughout the memo, are made in two formats: (1) the difference between the actual and target allocation, and (2) the percentage amount of the actual allocation relative to the target allocation.

		<u>Current</u>	<u>Target</u>		% Relative
Asset Category	<u>Asset Class</u>	<u>Allocation</u>	<u>Allocation</u>	<u>Difference</u>	to Target
GROWTH*		58.8%	58.0%	0.8%	101%
	Global Equity	41.5%	40.0%	1.5%	104%
	Private Equity	12.4%	11.0%	1.4%	113%
	Public Credit	1.7%	2.0%	-0.3%	84%
	Private Credit	3.1%	5.0%	-1.9%	61%
	Growth Absolute Return	0.1%	0.0%	0.1%	N/A
DIVERSIFYING*		22.9%	25.0%	-2.1%	92%
	Fixed Income	14.5%	16.0%	-1.5%	91%
	Absolute Return	6.4%	7.0%	-0.6%	92%
	Dedicated Cash	2.0%	2.0%	0.0%	99%
REAL RETURN**		16.9%	17.0%	-0.1%	99%
	Real Estate	7.0%	9.0%	-2.0%	78%
	Real Assets	8.2%	7.0%	1.2%	117%
	Liquid Real Return	1.7%	1.0%	0.7%	168%
OTHER CASH/OVERLAY		1.2%	0.0%	1.2%	N/A

^{*} Growth and Diversifying allocation weights do not include overlay proxy exposures, which are included in the Overlay allocation

During the second quarter of 2024, the following <u>Overlay Program rebalancing</u> occurred:

- Quarter-end rebalance:
 - Sold \$20 million in Growth proxy
 - Sold \$12 million in Diversifying proxy
 - Purchased \$28 million in Real Return proxy
 - Increased cash by \$4 million

Key current portfolio allocations relative to targets, and physical rebalancing considerations include:

- Global Equity has a 41.5% allocation as of June 30, 2024, down from a 42.5% allocation as of March 31, 2024, and above the 40% target allocation. During the second quarter of 2024, Staff performed physical rebalancing by selling approximately \$240 million of equity exposure, which brought the Global Equity allocation down under 41%; however a strong equity market rally late in the quarter brought the allocation back above 41% but still within range. No additional rebalancing is recommended at this time.
 - Domestic Equity has a 21.9% allocation as of June 30, 2024, down from the 22.4% allocation as of March 31, 2024. The 21.9% allocation is higher than the 20% target allocation, but below the 22% top of the range.
 - International Equity has a 16.7% allocation as of June 30, 2024, down from a 17.1% allocation as of March 31, 2024. The 16.7% allocation is above the 16% target allocation, but within range.

^{**} Real Return allocation includes overlay proxy exposures

- Global/Unconstrained has a 3% allocation as of June 30, 2024, maintaining the same 3% allocation as of March 31, 2024. The 3% allocation is below the 4% target allocation.
 - This is a newer sub-asset class and the remaining allocation will be implemented over time.
- **Fixed Income** has a 14.5% allocation as of June 30, 2024, up from a 13.4% allocation as of March 31, 2024. The 14.5% allocation is below the 16% target allocation, but within range.
 - Staff performed physical rebalancing during the second quarter of 2024 by contributing \$160 million across SCERS' four core plus fixed income managers (\$40 million each). No additional rebalancing is recommended at this time.
- Alternative Asset Class weights vs. target include:
 - **Absolute Return** 6.4% vs. 7.0% target
 - Private Equity 12.4% vs. 11.0% target
 - o Private Credit 3.1% vs. 5.0% target
 - Real Assets 8.2% vs. 7.0% target
 - **Real Estate** 7.0% vs. 9.0% target

BACKGROUND

The Overlay Program rebalances the asset allocation to policy targets and minimizes the risk that SCERS falls short of achieving its targeted return due to the asset allocation straying from policy target ranges. The Overlay Program also invests available cash, including: (1) unallocated cash; (2) the cash balances in manager portfolios; and (3) cash held for previously committed to, but un-invested private market investments, in a manner which replicates SCERS' policy target strategic asset allocation. The Overlay Program does not invest the 2% dedicated cash allocation.

While SCERS' Overlay Program reduces the need for physical rebalancing, it does not eliminate it, as there are circumstances whereby physical rebalancing would be a better solution compared to the Overlay Program, including when there is a persistently large difference between physical assets and the target allocation.

While physical rebalancing typically costs more to execute compared to the Overlay Program, it remains important to assess whether SCERS' portfolio is at a point where physical rebalancing warrants greater consideration.

The Overlay Program structure replicates SCERS' asset category targets (Growth; Diversifying; Real Return), with bands around these targets (see below). The rebalancing methodology that SSGA utilizes is quarterly rebalancing with bands, where rebalancing occurs on a quarterly basis (at the end of a quarter), unless the bands are breached on an intra-quarter basis, in which case rebalancing occurs upon the breach of a band.

Asset Category	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)
Growth	53	58	63
Diversifying	22	25	28
Cash	0	2	3
Real Return	15	17	19

Each asset category has a separate overlay proxy, which contains a mixture of investments that attempt to replicate the objectives and exposures of the asset category and the underlying asset classes within the asset category, in order to minimize tracking error and costs.

The underlying components of each asset category overlay proxy are shown within Appendix B of this report.

Because SCERS' Overlay Program rebalances SCERS' total fund, it is important to note that **Tables 1-15** in Appendix A refer only to physical holdings compared to policy targets, and not the exposures provided through the Overlay Program. The exception is Table 11 (Real Return asset category exposure), which includes the SSGA Real Return Strategy within the Liquid Real Return asset class, which is the Overlay proxy for this asset category, and is implemented through physical exposures (commingled funds).

SCERS' investment staff and general investment consultant, Verus Advisory, monitor the asset allocation on a quarterly basis and update the Board if the asset allocation moves outside of policy ranges and conditions warrant physical rebalancing.

FULL PORTFOLIO REVIEW

GROWTH ASSET CATEGORY:

The Growth asset category is comprised of the Global Equity, Private Equity, Public Credit, and Private Credit segments of the portfolio. The Growth Absolute Return segment was eliminated from the SAA and is close to being wound down. As outlined in **Table 1 of Appendix A**, the Growth asset category currently has an allocation of 58.8%, which is above with the strategic asset allocation's target of 58%, and the allocation is 101% relative to the target allocation. At a more granular level, the Global Equity and Private Equity exposures are above target while the remaining asset classes are below target.

The Overlay Program rebalances the Growth asset category to the 58% target allocation by purchasing or selling global equity futures to bring the Global Equity asset class to its target allocation, and then adjusts the remainder of the asset category by using a combination of 88% global equity futures and 12% U.S. Treasury futures.

At the end of the quarter, SCERS' overlay manager, SSGA, sold approximately \$20 million of overlay growth proxy exposure to rebalance the Growth asset category to its target allocation.

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Global Equities:

As outlined in **Table 2**, SCERS' Global Equity asset class, which includes the sub-asset classes of Domestic Equity, International Equity, and Global/Unconstrained Equity, has an actual weighting of 41.5%, which is above SCERS' policy target allocation of 40%, and the allocation is 104% relative to the target allocation. During the second quarter of 2024, Staff performed physical rebalancing by selling approximately \$240 million of equity exposure, which brought the Global Equity allocation down under 41%; however a strong equity market rally late in the quarter brought the allocation back above 41% but still within range. No additional rebalancing is recommended at this time.

At the sub-asset class level, Domestic Equity has an actual allocation of 21.9%, which is above its target allocation of 20% (109% relative to the target).

International Equity has an actual allocation of 16.7%, which is higher than the target allocation of 16% (104% relative to the target).

The newly formed Global/Unconstrained segment has a 3.0% allocation, which is below the 4% target allocation (74% relative to target). This is a newer sub-asset class and the remaining allocation will be implemented over time.

SSGA buys and sells a basket of global equity index futures to rebalance the Global Equity asset class toward the policy target allocation.

Private Equity:

As outlined in **Table 3**, SCERS' Private Equity allocation of 12.4% remains above the target allocation of 11%, but within range. The allocation is 113% relative to the target allocation.

SSGA utilizes a basket of 88% global equities and 12% U.S. Treasuries to replicate Private Equity, as part of a broader non-public equity proxy within the Growth asset category.

Public Credit:

As outlined in **Table 4**, SCERS' Public Credit allocation of 1.7% is slightly below the policy target allocation of 2%, and the allocation is 84% relative to the target allocation. SSGA utilizes a basket of 88% global equities and 12% U.S. Treasuries to replicate Public Credit, as part of a broader non-public equity proxy within the Growth asset category.

Private Credit:

As outlined in **Table 5**, SCERS' Private Credit allocation of 3.1% is below the policy target allocation of 5%, and the allocation is 61% relative to the target allocation. Private credit valuations are lagged a quarter. The commitment schedule and cash flow forecast of Private Credit investments projects SCERS achieving and maintaining the policy target in 2026.

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SSGA utilizes a basket of 88% global equities and 12% U.S. Treasuries to replicate Private Credit, as part of a broader non-public equity proxy within the Growth asset category.

Growth Absolute Return:

As outlined in **Table 6**, SCERS' Growth Absolute Return portfolio has a current allocation of 0.1%. The Growth Absolute Return Portfolio was eliminated from the revised SAA, and SCERS has nearly unwound the exposures within this portfolio. The small remaining allocation is expected to be unwound in 2024.

DIVERSIFYING ASSET CATEGORY:

The Diversifying asset category is comprised of the Fixed Income and Absolute Return segments of the portfolio, as well as the dedicated cash allocation. As outlined in **Table 7**, the Diversifying asset category currently has an allocation of 22.9%, which is below the strategic asset allocation's target of 25%, and the allocation is 92% relative to the target allocation.

The Overlay Program rebalances the Diversifying asset category to the target allocation by purchasing or selling U.S. government bond futures.

At the end of the quarter, SCERS' overlay manager, SSGA, sold approximately \$12 million of Diversifying asset category proxy exposure to rebalance the Diversifying asset category to its target allocation.

Fixed Income:

As outlined in **Table 8**, SCERS' Fixed Income allocation of 14.5% is below SCERS' policy target allocation of 16%, and the allocation is 91% relative to the target allocation. Staff performed physical rebalancing during the second quarter of 2024 by contributing \$160 million across SCERS' four core plus fixed income managers (\$40 million each). No additional rebalancing is recommended at this time.

The Overlay Program utilizes a combination of U.S. Treasury futures and Mortgage TBAs to rebalance this segment of the portfolio to its policy target allocation, as part of a broader Diversifying asset category proxy.

Absolute Return:

As outlined in **Table 9**, SCERS' Absolute Return allocation of 6.4% is below the policy target allocation of 7%, and the allocation is 92% relative to the target allocation.

SSGA utilizes a combination of U.S. Treasury futures and Mortgage TBAs to rebalance this segment of the portfolio to its policy target allocation, as part of a broader Diversifying asset category proxy.

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REAL RETURN ASSET CATEGORY:

The Real Return asset category is comprised of the Real Estate, Real Assets, and Liquid Real Return segments of the portfolio. As outlined below in **Table 11**, the Real Return asset category currently has an allocation of 16.9%, which is in line with the strategic asset allocation's target of 17%, and the allocation is 99% relative to the target allocation.

The Overlay Program rebalances the Real Return asset category to the 17% target allocation through the SSGA real return overlay proxy, by purchasing or selling a series of commingled funds across global REITs, global infrastructure stocks, global natural resource stocks, commodities, U.S. TIPS, and floating rate notes.

At the end of the quarter, SCERS' overlay manager, SSGA, purchased approximately \$28 million of overlay proxy exposure to rebalance the Real Return asset category to its target allocation.

Real Estate:

As outlined in **Table 12**, SCERS' Real Estate allocation of 7.0% is below the policy target allocation of 9%, and the allocation is 78% relative to the target allocation.

SSGA utilizes a series of listed commingled funds described above to replicate Real Estate, as part of the broader Real Return asset category proxy.

Real Assets:

As outlined in **Table 13**, SCERS' Real Assets allocation of 8.2%, is above the policy target allocation of 7%, and the allocation is 117% relative to the target allocation. Private real asset valuations are lagged a quarter.

SSGA utilizes a series of listed commingled funds described above to replicate Real Assets, as part of the broader Real Return asset category proxy.

Liquid Real Return:

As outlined in **Table 14**, SCERS' Liquid Real Return allocation of 1.7% is above the policy target allocation of 1%, and the allocation is 168% relative to the target allocation. The Liquid Real Return allocation is managed by State Street Global Advisors (SSGA), and functions as part strategic mandate and part overlay program proxy for the Real Return asset category. The latter is used to adjust broad Real Return asset category exposures during quarterly overlay rebalancing, and accounts for the slight overweight to the segment.

CASH:

As outlined in **Tables 10 and 15**, SCERS' total cash balance is approximately 3.2% (as of June 30, 2024), which includes a combination of the 2.0% dedicated cash allocation and 1.2% in other cash. The dedicated cash allocation of 2.0% is 98% relative to the 2% target allocation.

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The dedicated cash allocation is intended to close the gap between benefit payments and total contributions in an environment where investment earnings fall short of the targeted assumed rate of return, and also serves as a liquidity buffer.

Most of the 1.2% other cash allocation incorporates the remainder of the 2023-24 pre-funded annual employer contribution, which was received in July 2023. The other cash allocation is also used to fund drawdowns within the private market segments of the portfolio, and other implementation and rebalancing activity. SCERS' Overlay Program rebalances the portfolio by eliminating cash drag by investing the non-dedicated cash allocation (1.2%) into positions that replicate SCERS' target portfolio.

ATTACHMENTS

- Board Order
- Appendix A: Quarterly Portfolio Allocation and Rebalancing Detail
- Appendix B: SCERS Overlay Proxies

Prepared by:	Reviewed by:
/s/	/s/
Abel Pendergrass Retirement Investment Analyst	Eric Stern Chief Executive Officer
/s/	
Steve Davis Chief Investment Officer	



Retirement Board Order Sacramento County Employees' Retirement System

Before the Board of Retirement August 21, 2024

AGENDA ITEM: Portfolio Allocation and Rebalancing Report—Second Quarter 2024
THE BOARD OF RETIREMENT hereby accepts the recommendation of staff to receive and file the Portfolio Allocation and Rebalancing Report for the quarter ended June 30, 2024.
I HEREBY CERTIFY that the above order was passed and adopted on August 21, 2024 by the following vote of the Board of Retirement, to wit:
AYES: NOES: ABSENT: ABSTAIN: ALTERNATES: (Present but not voting)
Board President Eric Stern

Chief Executive Officer and

Board Secretary

APPENDIX A: Quarterly Portfolio Allocation and Rebalancing Detail (as of June 30, 2024)

						% Relative
Fund Name		Market Value	Actual	Target	Delta	to Target
Total Fund		\$13,165,702,857				
Table 1: GROWTH ASSET CATEGORY						
Table 1. GROWTH ASSET CATEGORY						% Relative
		Market Value	Actual	Target	Delta	to Target
GROWTH ASSET CATEGORY:		\$7,738,485,398	58.8%	58.0%	0.8%	101%
		. , , , ,				
Table 2: Global Equity Asset Class	Allo	owable Range: 36-4	4%			
						% Relative
Global Equity	Sub-Asset Class	Market Value	Actual	Target	Delta	to Target
		\$5,468,499,534	41.5%	40.0%	1.5%	104%
		. , , ,				
		Market Value	Actual	Target	Delta	to Target
	Domestic Equity	\$2,880,083,494	21.9%	20.0%	1.9%	109%
AllianceBernstein	Equity Core Index	\$1,397,151,156	10.6%			
JP Morgan 130/30	Equity Core Active Short Extension (130/30)	\$214,389,584	1.6%			
DE Shaw Broad Market Core Alpha Extension	Equity Core Active Short Extension (130/30)	\$184,270,158	1.4%			
Eagle Capital Management	Equity Large Cap Core	\$424,133,780	3.2%			
AQR US Enhanced Equity	Equity Systematic Multi-Factor Core	\$415,046,058	3.2%			_
	Equity Large Cap		20.0%	18.0%	2.0%	
Snyder Capital Management	Equity Small Cap Value	\$139,981,404	1.1%			
Weatherbie & Co.	Equity Small Cap Value Equity Small Cap Growth	\$105,111,354	0.8%			
Weatherpie & Co.	Equity Small Cap	\$100,111,004	1.9%	2.0%	-0.1%	_
	Equity Small Sup		1.070	2.070	0.170	
						% Relative
		Market Value	Actual	Target	Delta	to Target
	International Equity	\$2,196,171,333	16.7%	16.0%	0.7%	104%
Lazard Asset Management	ACWI Ex-US	\$330,707,199	2.5%			
LSV Large Cap International Value	International Equity Large Cap Value	\$518,167,279	3.9%			
Walter Scott	International Equity Large Cap Growth	\$496,473,766	3.8%			
William Blair & Co.	International Equity Small Cap Growth	\$101,995,699	0.8%			
Acadian Asset Management	International Equity Small Cap Value	\$116,000,748	0.9%	44.00/	0.70/	_
	International Developed		11.9%	11.2%	0.7%	
Baillie Gifford	Emerging Markets Equity - All Cap	\$228,062,092	1.7%			
ARGA Emerging Markets Equity Fund	Emerging Markets Equity - All Cap	\$203,786,780	1.5%			
Oaktree Emerging Markets Equity Fund	Emerging Markets Equity - All Cap	\$200,977,770	1.5%			
	Emerging Markets		4.8%	4.8%	0.0%	_
						% Relative
		Market Value	Actual	Target	Delta	to Target
NELL A LAM	Global/Unconstrained Equity	\$392,244,708	3.0%	4.0%	-1.0%	74%
Nikko Asset Management CIT	Global Equity	\$145,440,000	1.1%			
Artisan Partners Global Opportunities	Global Equity	\$148,897,959	1.1%			
Allspring Global Investments Third Point Partners Qualified, LP	Global Equity Event Driven	\$93,366,540	0.7% 0.0%			
HIII G FOIR FAILUEIS QUAIREU, LP	Everil Driver	\$4,540,209	0.070			

Debugge Franklin	Out Otrotom	Mandard Value	A - 4 1	T4	D-#-	% Relati
Private Equity	Sub-Strategy	Market Value \$1,631,161,760	Actual 12.4%	Target 11.0%	Delta 1.4%	to Targe
Accel-KKR Capital Partners V, LP	Buyout	\$24,584,274	0.2%		,,	,
Accel-KKR Capital Partners VI, LP	Buyout	\$27,939,335	0.2%			
accel-KKR Capital Partners VII, LP	Buyout	\$0	0.0%			
Accel-KKR Growth Capital Partners II, LP	Buyout	\$7,722,847	0.1%			
Accel-KKR Growth Capital Partners III, LP	Buyout	\$33,403,785	0.3%			
ccel-KKR Growth Capital Partners IV, LP Cortec Group Fund VII, LP	Buyout	\$13,639,862 \$26,360,824	0.1% 0.0%			
Cortec Group Fund VIII, LP	Buyout Buyout	\$3,709,477	0.0%			
Gridiron Capital Fund IV, LP	Buyout	\$52,876,991	0.4%			
I.I.G. Capital Partners V, LP	Buyout	\$6,709,104	0.1%			
inden Capital Partners III, LP	Buyout	\$19,806,772	0.2%			
inden Capital Partners IV, LP	Buyout	\$38,491,350	0.3%			
inden Capital Partners V, LP	Buyout	\$18,090,151	0.1%			
Marlin Equity Partners IV, LP	Buyout	\$9,411,162	0.1%			
farlin Equity Partners V, LP	Buyout	\$31,183,543	0.2%			
farlin Heritage Europe, LP	Buyout	\$19,285,720	0.1%			
farlin Heritage, LP	Buyout	\$4,169,498	0.0%			
farlin Heritage II, LP	Buyout	\$10,381,808	0.1%			
larlin Heritage III, L.P.	Buyout	\$6,766,940	0.1%			
Aktree Power Opportunities Fund VI, LP	Buyout	\$26,660,633	0.2%			
hamrock Capital Growth Fund V, LP	Buyout	\$12,511,473	0.1%			
hamrock Capital Growth Fund VI	Buyout	\$0	0.0%			
homa Bravo Fund XII, LP	Buyout	\$20,340,090	0.2%			
homa Bravo Fund XII, LP homa Bravo Fund XIII, LP	Buyout	\$33,516,616 \$63,729,052	0.3%			
SG 7 A, LP	Buyout Buyout	\$12,409,430	0.5% 0.1%			
SG 7 B, LP	Buyout	\$3,322,153	0.1%			
SG 8, LP	Buyout	\$39,252,161	0.0%			
SG, LP	Buyout	\$6,996,132	0.1%			
Vynnchurch Capital Partners V, LP	Buyout	\$19,340,131	0.1%			
Vynnchurch Capital Partners VI, LP	Buyout	\$0	0.0%			
CVC Capital Partners IX, LP	Buyout	\$0	0.0%			
I.I.G. Europe Capital Partners II, LP	European Buyout	\$10,563,193	0.1%			
Vaterland Private Equity Fund V, CV	European Buyout	\$790,316	0.0%			
Vaterland Private Equity Fund VI, CV	European Buyout	\$12,881,101	0.1%			
RJ Capital Master Fund II, LP	Asian Buyout/Special Situations	\$4,265,125	0.0%			
RJ Capital Master Fund III, LP	Asian Buyout/Special Situations	\$7,538,786	0.1%			
hamrock Capital Content Fund II, L.P.	Growth Equity	\$12,511,473	0.1%			
hamrock Capital Content Fund III, L.P.	Growth Equity	\$505,922	0.0%			
Spectrum Equity Investors VII, LP	Growth Equity	\$32,502,087	0.2%			
Spectrum Equity Fund VIII, LP	Growth Equity	\$23,055,364	0.2%			
Spectrum Equity Fund IX, L.P.	Growth Equity	\$21,482,396	0.2%			
Spectrum Equity X, L.P.	Growth Equity	\$4,000,267	0.0%			
Summit Partners VC Fund III, LP	Growth Equity	\$3,607,776	0.0%			
summit Partners Venture Capital Fund IV, LP summit Partners Venture Capital V, L.P.	Growth Equity Growth Equity	\$52,527,951 \$12,462,272	0.4% 0.1%			
Summit Partners Venture Capital V, E.F. Summit Partners Europe Growth Equity Fund II, LP	European Growth Equity	\$13,462,273 \$47,075,459	0.1%			
Summit Partners Europe Growth Equity Fund III, L.P.	European Growth Equity	\$18,086,661	0.1%			
Canvas 3, L.P.	Venture Capital	\$15,476,933	0.1%			
CRV XVIII, L.P.	Venture Capital	\$17,600,364	0.1%			
RV XIX, LP	Venture Capital	\$7,578,023	0.1%			
RV Select II, LP	Venture Capital	\$6,905,589	0.1%			
hosla Ventures IV, LP	Venture Capital	\$11,957,364	0.1%			
hosla Ventures V, L.P.	Venture Capital	\$36,653,327	0.3%			
hosla Ventures VI, L.P.	Venture Capital	\$57,468,506	0.4%			
hosla Ventures VII, L.P.	Venture Capital	\$18,503,201	0.1%			
hosla Ventures VIII, L.P.	Venture Capital	\$8,335,169	0.1%			
ew Enterprise Associates 14, LP	Venture Capital	\$39,096,879	0.3%			
ew Enterprise Associates 15, LP	Venture Capital	\$27,476,270	0.2%			
lew Enterprise Associates 16, LP	Venture Capital	\$35,818,444	0.3%			
lew Enterprise Associates 17, LP	Venture Capital	\$21,394,541	0.2%			
brbiMed Private Investments VIII, L.P.	Venture Capital	\$10,774,434	0.1%			
rbiMed Private Investments IX, L.P.	Venture Capital	\$6,404,997	0.0%			
hreshold Ventures IVI LP	Venture Capital	\$21,668,285 \$7,244,072	0.2%			
hreshold Ventures IV, LP rinity Ventures XI, LP	Venture Capital	\$7,244,072 \$41,876,097	0.1%			
rinity Ventures XI, LP	Venture Capital Venture Capital		0.3% 0.3%			
•	Distressed Debt	\$43,436,633 \$1,714,801	0.3%			
Ichemy Special Opportunities Fund V, L.P.		\$1,714,801 \$255,499				
talaya Special Opportunities Fund V, LP	Distressed Debt		0.0%			
talaya Special Opportunities Fund VI, LP avidson Kempner Distressed Opportunities Fund III, LP	Distressed Debt Distressed Debt	\$1,055,441 \$18,448,967	0.0% 0.1%			
avidson Kempner Distressed Opportunities Fund IV, LP	Distressed Debt	\$31,694,116	0.1%			
arrison Opportunity Fund III, LP	Distressed Debt	\$1,384,851	0.2%			
I.G. Bayside Loan Opportunity III (Europe), LP	Distressed Debt	\$3,412,306	0.0%			
trategic Value Special Situations Fund V, L.P.	Distressed Debt	\$21,148,725	0.2%			
PG Opportunities Partners III, LP	Distressed Debt	\$6,088,774	0.0%			
SSP Opportunities Partners IV, LP	Distressed Debt	\$25,231,113	0.2%			
ixth Street Opportunities Partners V, L.P.	Distressed Debt	\$18,635,884	0.1%			
Vayzata Opportunities Fund III, LP	Distressed Debt	\$1,211,136	0.0%			
olden Capital Co-Investments, LP	Co-Investments	\$40,117,355	0.3%			
yal Capital Partners II, LP	Other	\$36,654,428	0.3%			
yal Capital Partners III, LP	Other	\$29,353,810	0.2%			
bbott Capital ACE VI	Fund of Funds	\$22,695,537	0.2%			
oldman Sachs PEP X	Fund of Funds	\$0	0.0%			
larbourvest Partners Intl VI	Fund of Funds	\$0	0.0%			
HarbourVest Partners VIII RCP Multi-Fund Feeder (SCERS), L.P.	Fund of Funds Fund of Funds	\$1,802,003	0.0%			

Table 4: Public Credit Asset Class	Out Overtee	Manda (34)	8% A-4I	T	D-"	% Relativ
Public Credit	Sub-Strategy	Market Value \$228,743,880	Actual 1.7%	Target 2.0%	-0.3%	to Targe 84%
Brigade Capital SC Opportunities Mandate	Public Credit	\$228,743,880	1.7%	2.0%	-0.3/0	04 /0
Table 5: Private Credit Asset Class		Allowable Range: 3-7	' %			
						% Relativ
Private Credit	Sub-Strategy	Market Value	Actual	Target	Delta	to Targe
Anna Canital Firmana Firmal V I D	Discott andisco	\$403,250,250	3.1%	5.0%	-1.9%	61%
Ares Capital Europe Fund V, LP	Direct Lending	\$28,770,877	0.2% 0.0%			
Ares Senior Direct Lending Fund III, LP	Direct Lending Direct Lending	\$0 \$16,876,351	0.0%			
Benefit Street Partners Senior Opportunities Fund, LP	Direct Lending Direct Lending	\$38,820,271	0.1%			
Benefit Street Partners Senior Opportunities Fund II, LP Brookfield Infrastructure Debt Fund III, LP	Direct Lending	\$20,834,363	0.3%			
FM U.S. Infrastructure Debt Fund, LP	Direct Lending	\$35,032,828	0.2%			
Shamrock Capital Debt Opportunities Fund I, LP	Direct Lending	\$9,301,498	0.1%			
Summit Partners Credit Fund, LP	Direct Lending	\$30,457	0.1%			
Summit Partners Credit Fund II, LP	Direct Lending	\$10,355,678	0.1%			
Summit Partners Credit Fund III, LP	Direct Lending	\$11,696,912	0.1%			
Summit Partners Credit Fund IV, LP	Direct Lending	\$14,117,947	0.1%			
Tennenbaum Capital Partners Direct Lending Fund VIII (S), L	Direct Lending	\$110,204,248	0.1%			
Athyrium Opportunities Fund II, LP	Healthcare Opportunistic Lending	\$1,450,096	0.0%			
Athyrium Opportunities Fund II, LP	Healthcare Opportunistic Lending	\$7,738,405	0.0%			
OrbiMed Royalty and Credit Opportunities Fund III, LP	Healthcare Opportunistic Lending		0.1%			
OrbiMed Royalty & Credit Opportunities IV, LP	Healthcare Opportunistic Lending	\$15,718,945 \$13,243,122	0.1%			
MCP Private Capital Fund IV, SCSp	Opportunistic Lending	\$26,775,419	0.1%			
Silver Point Specialty Credit Fund II, L.P.	Opportunistic Lending	\$31,265,074	0.2%			
Silver Point Specialty Credit Fund III, L.P.	Opportunistic Lending	\$11,017,758	0.2%			
Sky Leasing Fund VI, L.P.	Opportunistic Lending	\$11,017,756 \$0	0.1%			
Table 6: Growth Absolute Return Asset Class	0	Allowable Range: 0%	/ -			
Table 0. Growth Absolute Neturn Asset Glass		Allowable Nalige. 0	76			% Relativ
Growth Absolute Return	Sub-Strategy	Market Value	Actual	Target	Delta	to Targe
		\$6,829,974	0.1%	0.0%	0.1%	N/A
	Diversified Separate Account	\$6,829,974	0.1%			
Grosvenor SCARF - Growth Series Table 7: DIVERSIFYING ASSET CATEGORY	Diversified Separate Account					% Relativ
Table 7: DIVERSIFYING ASSET CATEGORY	Diversified Separate Account	Market Value	Actual	Target	Delta	to Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY:	·	Market Value \$3,011,695,438	Actual 22.9%	Target 25.0%	Delta -2.1%	
Table 7: DIVERSIFYING ASSET CATEGORY	·	Market Value	Actual 22.9%			to Targe 92%
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY:	·	Market Value \$3,011,695,438	Actual 22.9%			to Targe 92% % Relativ to Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class		Market Value \$3,011,695,438 Allowable Range: 12-2	Actual 22.9%	25.0%	-2.1%	to Targe 92% % Relativ
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class		Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value	Actual 22.9%	25.0% Target	-2.1% Delta	to Targe 92% % Relativ to Targe
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income	Sub-Strategy Core Plus Active Fixed Income Core Plus Active Fixed Income	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414	Actual 22.9% 20% Actual 14.5%	25.0% Target 16.0%	-2.1% Delta	to Targe 92% % Relativ to Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management	Sub-Strategy Core Plus Active Fixed Income	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921	Actual 22.9% 20% Actual 14.5% 2.9%	25.0% Target 16.0% 3.0%	-2.1% Delta	to Targe 92% % Relativ to Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW	Sub-Strategy Core Plus Active Fixed Income	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563	Actual 22.9% 20% Actual 14.5% 2.9% 2.8%	Target 16.0% 3.0% 3.0%	-2.1% Delta -1.5%	to Targe 92% % Relative to Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income	Sub-Strategy Core Plus Active Fixed Income Core Plus Active Fixed Income Core Plus Active Fixed Income	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8%	Target 16.0% 3.0% 3.0% 3.0%	-2.1% Delta	to Targe 92% % Relative to Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams	Sub-Strategy Core Plus Active Fixed Income	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.9%	Target 16.0% 3.0% 3.0% 3.0% 3.0%	-2.1% Delta -1.5%	to Targe 92% % Relative to Targe
Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman	Sub-Strategy Core Plus Active Fixed Income Core Plus	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.9% 11.4% 3.1%	Target 16.0% 3.0% 3.0% 3.0% 3.0% 12.0%	-2.1% Delta -1.5%	to Targe 92% % Relativ to Targe
Cable 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class	Sub-Strategy Core Plus Active Fixed Income US Treasuries	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9	Actual 22.9% 22.9% 2.8% 2.8% 2.99% 11.4% 3.1%	25.0% Target 16.0% 3.0% 3.0% 3.0% 3.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relative to Targe 91% % Relative We Relative We Relative We Relative We Relative We
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class	Sub-Strategy Core Plus Active Fixed Income Core Plus	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-8	Actual 22.9% 22.9% 2.8% 2.8% 2.9% 11.4% 3.1% Actual	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relative to Targe 91% % Relative to Targe 10% % Relative to Targe 10%
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.9% 11.4% 3.1% Actual 6.4%	25.0% Target 16.0% 3.0% 3.0% 3.0% 3.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relative to Targe 91% % Relative was a relative to Targe 91%
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.99% 11.4% 3.1% 4.5% 4.6% 1.9%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relatit to Targe 91% % Relatit to Targe 10 Targe
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd	Sub-Strategy Core Plus Active Fixed Income Sub-Strategy Diversified Separate Account Discretionary Global Macro	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$43,768,587 \$251,514,695 \$51,873,100	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.89% 11.4% 3.1% Actual 1.9% 0.4%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relatit to Targe 91% % Relatit to Targe 10 Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Marshall Wace Global Opportunities Fund	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,766,587 \$251,514,695 \$51,873,100 \$62,761,275	Actual 22.9% 2.9% 2.8% 2.9% 3.1% 4.4% 4.4% 4.4% 4.9% 4.4% 4.9% 4.4% 4.9% 4.4% 4.9% 4.5% 4.5%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relatit to Targe 91% % Relatit to Targe 10 Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Warshall Wace Global Opportunities Fund Junto Capital Partners LP	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.9% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.5% 0.4%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relatit to Targe 91% % Relatit to Targe 10 Targe
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Marshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.9% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.5% 0.4% 0.4%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targue 92% % Relati to Targue 91% % Relati to Targue 10 Targu
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Warshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702	Actual 22.9% Actual 14.5% 2.9% 2.8% 2.8% 2.99% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.5% 0.4% 0.6%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relatit to Targe 91% % Relatit to Targe 10 Targe
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Warshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP Davidson Kempner Institutional Partners, LP	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120	Actual 22.9% 2.9% 2.8% 2.8% 2.8% 2.89% 11.4% 3.1% Actual 6.4% 0.4% 0.4% 0.4% 0.6% 0.6% 0.5%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relative to Targe 91% % Relative to Targe 10% % Relative to Targe 10%
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Marshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP Davidson Kempner Institutional Partners, LP PSquared Event Opportunity Fund, L.P.	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven Event Driven	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120 \$53,952,050	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.99% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.4% 0.4% 0.6% 0.5% 0.4% 0.4%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relative to Targe 91% % Relative to Targe 10% % Relative to Targe 10%
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Warshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP Davidson Kempner Institutional Partners, LP PSquared Event Opportunity Fund, L.P. Aristeia Partners, L.P.	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven Event Driven Fixed Income Relative Value	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120 \$53,952,050 \$53,773,965	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.9% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.5% 0.4% 0.4% 0.6% 0.5% 0.4% 0.4%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relatit to Targe 91% % Relatit to Targe 10 Targe
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Warshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP Davidson Kempner Institutional Partners, LP PSquared Event Opportunity Fund, L.P. Aristeia Partners, LP. Laurion Capital Management, LP	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven Event Driven Fixed Income Relative Value Volatility Arbitrage	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120 \$53,952,050 \$53,773,965 \$60,551,491	Actual 22.9% Actual 14.5% 2.9% 2.8% 2.8% 2.99% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.5% 0.4% 0.6% 0.4% 0.5%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targue 92% % Relati to Targue 91% % Relati to Targue 10 Targu
Table 7: DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Warshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP Davidson Kempner Institutional Partners, LP PSquared Event Opportunity Fund, L.P. Aristeia Partners, L.P.	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven Event Driven Fixed Income Relative Value	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120 \$53,952,050 \$53,773,965	Actual 22.9% 20% Actual 14.5% 2.9% 2.8% 2.8% 2.9% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.5% 0.4% 0.4% 0.6% 0.5% 0.4% 0.4%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targue 92% % Relati to Targue 91% % Relati to Targue 10 Targu
Prudential Investment Management CW Brandywine U.S. Fixed Income Reams Publie 9: Absolute Return Asset Class Prosvenor SCARF - Diversifying Series Fudor BVI Global Fund Ltd Marshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP Davidson Kempner Institutional Partners, LP PSquared Event Opportunity Fund, L.P. Aristeia Partners, L.P. Laurion Capital Management, LP Graham Tactical Trend Fund, L.P. Graham Tactical Trend Fund, L.P. Graham Tactical Trend Fund, L.P. Grulptor Domestic Partners II, LP	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven Event Driven Fixed Income Relative Value Volatility Arbitrage Systematic Global Macro	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120 \$63,853,120 \$53,952,050 \$53,773,965 \$60,551,491 \$52,748,796 \$0	Actual 22.9% 2.9% 2.8% 2.8% 2.99% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.4% 0.5% 0.4% 0.4% 0.5% 0.4% 0.0%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targue 92% % Relati to Targue 91% % Relati to Targue 10 Targu
Consider the Constitutional Partners, LP Davidson Kempner Institutional Partners, LP Davidson Kempner Institut	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven Event Driven Fixed Income Relative Value Volatility Arbitrage Systematic Global Macro	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120 \$53,952,050 \$53,952,050 \$53,773,965 \$60,551,491 \$52,748,796 \$0 Allowable Range: 0-2	Actual 22.9% Actual 14.5% 2.9% 2.8% 2.8% 2.99% 11.4% 3.1% Actual 6.49% 0.4% 0.5% 0.4% 0.6% 0.5% 0.4% 0.0%	Target 16.0% 3.0% 3.0% 3.0% 4.0% Target 7.0%	-2.1% Delta -1.5% -0.6% -0.9% Delta -0.6%	% Relati to Targe 91% % Relati to Targe 91% % Relati to Targe 92%
DIVERSIFYING ASSET CATEGORY DIVERSIFYING ASSET CATEGORY: Table 8: Fixed Income Asset Class Fixed Income Prudential Investment Management TCW Brandywine U.S. Fixed Income Reams Neuberger Berman Table 9: Absolute Return Asset Class Absolute Return Grosvenor SCARF - Diversifying Series Tudor BVI Global Fund Ltd Warshall Wace Global Opportunities Fund Junto Capital Partners LP BlackRock Event Driven Equity Fund Elliott Associates LP Davidson Kempner Institutional Partners, LP PSquared Event Opportunity Fund, L.P. Aristeia Partners, L.P. Laurion Capital Management, LP Graham Tactical Trend Fund , L.P.	Sub-Strategy Core Plus Active Fixed Income Core Plus US Treasuries Sub-Strategy Diversified Separate Account Discretionary Global Macro Equity Long/Short Equity Long/Short Event Driven Event Driven Event Driven Event Driven Fixed Income Relative Value Volatility Arbitrage Systematic Global Macro	Market Value \$3,011,695,438 Allowable Range: 12-2 Market Value \$1,907,754,414 \$378,054,921 \$369,852,563 \$366,258,781 \$386,697,640 \$406,890,509 Allowable Range: 5-9 Market Value \$843,768,587 \$251,514,695 \$51,873,100 \$62,761,275 \$52,124,580 \$56,782,814 \$83,832,702 \$63,853,120 \$63,853,120 \$53,952,050 \$53,773,965 \$60,551,491 \$52,748,796 \$0	Actual 22.9% 2.9% 2.8% 2.8% 2.99% 11.4% 3.1% Actual 6.4% 1.9% 0.4% 0.4% 0.5% 0.4% 0.4% 0.5% 0.4% 0.0%	Target 16.0% 3.0% 3.0% 3.0% 12.0% 4.0%	-2.1% Delta -1.5% -0.6% -0.9%	to Targe 92% % Relative to Targe 91% % Relative to Targe 10% % Relative to Targe 10%

		Market Value	Actual	Target	Delta	% Relative to Target
REAL RETURN ASSET CATEGORY:		\$2,221,044,253	16.9%	17.0%	-0.1%	99%
able 12: Real Estate Asset Class	A	Allowable Range: 7-1	1%			% Relative
Real Estate	Sub-Strategy	Market Value	Actual	Target	Delta	to Target
Prookfield Promier Peel Estate Partners D	Core Real Estate	\$923,749,962 \$107,032,825	7.0% 0.8%	9.0%	-2.0%	78%
Brookfield Premier Real Estate Partners, LP	Core Real Estate		0.8%			
Clarion Lion Properties Fund, LP		\$112,459,230	0.6%			
MetLife Core Property Fund, LP	Core Real Estate	\$73,288,434				
Principal US Property Account	Core Real Estate	\$54,402,180 \$56,561,613	0.4%			
Prologis Targeted Europe Logistics Fund, LP	Core Real Estate	\$56,561,612	0.4%			
Prologis Targeted US Logistics Fund, LP	Core Real Estate	\$71,430,490	0.5%			
Townsend Real Estate Fund, LP	Core Real Estate	\$136,791,357	1.0%			
Carlyle China Realty, L.P.	Non-Core Real Estate - Opportunistic	\$6,387,080	0.0%			
Carlyle China Rome Logistics, L.P.	Non-Core Real Estate - Opportunistic	\$28,391,978	0.2%			
KR Real Estate Partners Americas, LP	Non-Core Real Estate - Opportunistic	\$1,007,684	0.0%			
aSalle China Logistics Venture, LP	Non-Core Real Estate - Opportunistic	\$11,579,671	0.1%			
Sculptor Real Estate Fund III, LP	Non-Core Real Estate - Opportunistic	\$3,676,525	0.0%			
Sculptor Real Estate Fund IV, L.P.	Non-Core Real Estate - Opportunistic	\$20,618,243	0.2%			
Asana Partners Fund II, L.P.	Non-Core Real Estate - Value-Added	\$36,103,340	0.3%			
Asana Partners Fund III, L.P.	Non-Core Real Estate - Value-Added	\$16,521,353	0.1%			
CIM Opportunity Fund VIII, LP	Non-Core Real Estate - Value-Added	\$22,825,231	0.2%			
DRC European Real Estate Debt Fund II, LP	Non-Core Real Estate - Value-Added	\$292,496	0.0%			
ECE European Prime Shopping Centre Fund II, SCS-SIF	Non-Core Real Estate - Value-Added	\$33,232,923	0.3%			
Hammes Partners II, LP	Non-Core Real Estate - Value-Added	\$2,832,635	0.0%			
Hammes Partners III, LP	Non-Core Real Estate - Value-Added	\$21,942,775	0.2%			
Hammes Partners IV, LP	Non-Core Real Estate - Value-Added	\$873,284	0.0%			
NREP Nordic Strategies Fund, FCP-FIS	Non-Core Real Estate - Value-Added	\$132,889	0.0%			
NREP Nordic Strategies Fund II, FCP-FIS	Non-Core Real Estate - Value-Added	\$18,357,152	0.1%			
NREP Nordic Strategies Fund III, FCP-FIS	Non-Core Real Estate - Value-Added	\$34,820,593	0.1%			
NREP Nordic Strategies Fund IV, FCP-FIS	Non-Core Real Estate - Value-Added	\$23,611,575	0.3%			
NREP Nordic Strategies Fund IV, PCF-FIS NREP Nordic Strategies Fund V, SCSp	Non-Core Real Estate - Value-Added		0.2%			
- · · · · · · · · · · · · · · · · · · ·	Non-Core Real Estate - Value-Added Non-Core Real Estate - Value-Added	\$15,276,631 \$13,200,776	0.1%			
Seven Seas Japan Opportunity Fund, GK	Non-Core Real Estate - Value-Added	\$13,299,776	0.1%			
Table 13: Real Assets Asset Class		Allowable Range: 5-9	9%			9/ Balatin
Real Assets	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		\$1,076,040,709	8.2%	7.0%	1.2%	117%
ACM Fund II, LP	Agriculture	\$14,850,415	0.1%			
Paine Schwartz Food Chain Fund V, L.P.	Agriculture	\$34,871,680	0.3%			
EnCap Energy Capital Fund IX, LP	Energy	\$7,168,097	0.1%			
EnCap Energy Capital Fund X, LP	Energy	\$22,636,826	0.2%			
NGP Royalty Partners, L.P.	Energy	\$21,913,548	0.2%			
NGP Royalty Partners II, L.P.	Energy	\$50,120,095	0.4%			
Failwater Energy Fund III, LP	Energy	\$20,823,445	0.2%			
Failwater Energy Fund IV, LP	Energy	\$28,205,593	0.2%			
			0.2%			
Quantum Energy Partners VI, LP	Energy	\$19,365,168	0.1%			
Quantum Energy Partners VII, LP	Energy	\$21,807,283				
Ara Partners Fund II, L.P.	Infrastructure	\$5,568,708	0.0%			
ArcLight Energy Partners Fund VI, LP	Infrastructure	\$12,840,358	0.1%			
Brookfield Infrastructure Fund III, LP	Infrastructure	\$40,502,515	0.3%			
Brookfield Infrastructure Fund IV, LP	Infrastructure	\$38,863,340	0.3%			
Brookfield Super-Core Infrastructure Partners	Infrastructure	\$103,382,557	0.8%			
Digital Colony Partners II, L.P.	Infrastructure	\$31,900,182	0.0%			
EnCap Flatrock Midstream Fund III, LP	Infrastructure	\$10,219,087	0.1%			
EnCap Flatrock Midstream Fund IV, LP	Infrastructure	\$12,821,098	0.1%			
EQT Infrastructure IV, SCSp	Infrastructure	\$39,429,890	0.3%			
First Reserve Energy Infrastructure Fund II, LP	Infrastructure	\$9,389,375	0.1%			
Harrison Street Social Infrastructure Fund LP	Infrastructure	\$106,876,928	0.8%			
FM Global Infrastructure Fund	Infrastructure	\$167,659,741	1.3%			
SQ Global Infrastructure Fund II, LP	Infrastructure	\$54,105,040	0.4%			
SQ Global Infrastructure Fund III, L.P.	Infrastructure	\$24,680,268	0.2%			
KKR Asia Pacific Infrastructure Fund II SCSp	Infrastructure	\$10,712,144	0.1%			
Meridiam Infrastructure North America III. LP	Infrastructure	\$44,716,864	0.1%			
Meridiam Infrastructure North America IV, LP	Infrastructure	\$12,184,050	0.1%			
Weridiam Sustainable Infrastructure Europe IV, SLP	Infrastructure	\$9,652,520	0.1%			
Pantheon SCERS SIRF, LLC			0.1%			
	Infrastructure	\$36,029,837 \$19,953,553				
Ridgewood Water & Strategic Infrastructure Fund II, LP	Infrastructure		0.2%			
	Infrastructure	\$4,160,638 \$38,629,865	0.0% 0.3%			
	Power Congration		0.570			
Carlyle Power Partners II, LP	Power Generation					
Carlyle Power Partners II, LP		Allowable Range: 0-3	3%			% Relative
Carlyle Power Partners II, LP Fable 14: Liquid Real Return Asset Class		Allowable Range: 0-3	Actual	Target	Delta	to Target
Wastewater Opportunity Fund, LLC Carlyle Power Partners II, LP Fable 14: Liquid Real Return Asset Class Liquid Real Return SSGA Real Return Overlay Strategy	Sub-Strategy	Allowable Range: 0-3 Market Value \$221,253,582	Actual 1.7%	Target	Delta	
Carlyle Power Partners II, LP Table 14: Liquid Real Return Asset Class Liquid Real Return SSGA Real Return Overlay Strategy		Allowable Range: 0-3	Actual			to Target
Carlyle Power Partners II, LP Table 14: Liquid Real Return Asset Class Liquid Real Return SSGA Real Return Overlay Strategy Brookfield Liquid Real Return	Sub-Strategy Passive Liquid Real Return Proxy	Market Value \$221,253,582 \$221,183,584	Actual 1.7% 1.7%			to Target
arlyle Power Partners II, LP able 14: Liquid Real Return Asset Class iquid Real Return ISGA Real Return Overlay Strategy Irrockfield Liquid Real Return able 15: Other Cash/Overlay	Sub-Strategy Passive Liquid Real Return Proxy	Market Value \$221,253,582 \$221,183,584	Actual 1.7% 1.7%			to Target 168%
Carlyle Power Partners II, LP Fable 14: Liquid Real Return Asset Class	Sub-Strategy Passive Liquid Real Return Proxy	Market Value \$221,253,582 \$221,183,584 \$69,998	Actual 1.7% 1.7% 0.0%	1.0%	0.7%	% Relative to Target 168% % Relative to Target

Appendix B: Overlay Proxies

Growth Asset Category Proxy		
	Policy Allocation	Overlay Implementation
Domestic Equities	20%	Basket of S&P 500, S&P 400, and Russell 2000 Futures
International Equities	20%	Basket of Local Index, EAFE, EM Futures plus currency
Private Equity	11%	Basket of 85% Global Equity and 15% US TSY
Public Credit	2%	Basket of 85% Global Equity and 15% US TSY
Private Credit	5%	Basket of 85% Global Equity and 15% US TSY

Diversifying Asset Category	Proxy	
	Policy Allocation	Overlay Implementation
Fixed Income	16%	Basket of Treasury Futures and Mortgage TBAs (forwards)
Absolute Return	7%	Basket of Treasury Futures and Mortgage TBAs (forwards)
Cash	1%	+/- 15 bps of 1% cash target

Real Return Asset Category Prox	у	
	Policy Allocation*	Overlay Implementation
Global Real Estate (REITs)	15%	FTSE EPRA/NAREIT Developed Liquid Index
Global Infrastructure Equity	25%	S&P Global Infrastructure Index
Global Natural Resources Equity	10%	S&P Global Large Mid Cap Commodity and Resources Index
Commodities	10%	Bloomberg Roll Select Commodity Index
US Intermediate TIPS	30%	Bloomberg Barclays 1-10 Year US TIPS Index
Floating Rate Notes	10%	Bloomberg Barclays US Dollar Floating Rate Note < 5 Years Index

^{*}Relative to Real Return Asset Category